

The
**Build
Fellowship**

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Database Design and Setup

March 2025

Weekly Agenda

- Week 1: Introductions
- Week 2: Project Ideation
- **Week 3: Database Design and Setup and Version Control**
- Week 4: Backend Development and Version Control
- Week 5: API Development
- Week 6: JavaScript Frameworks and Frontend Development
- Week 7: Frontend Development and Putting it All Together
- Week 8: Presentations



Agenda

- Database Design
- Backend
- Tasks



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Demo Time!

Project Ideation

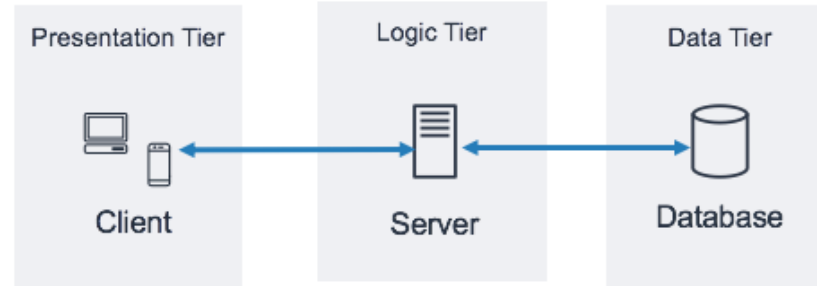
Your Ideas!



Backend Development



Multi-Tier Architecture



API Tier

- Will accept requests from the frontend and save data in the database.
- Ensures integrity of the data coming from the frontend.
- CRUD operations

Example Endpoints

Here are some example API endpoints that a grocery list app might have:

- **POST /api/items:** Add a new item to the grocery list.
 - Request body: { "itemName": "Milk", "quantity": 2, "unit": "liters", "category": "Dairy", "notes": "Organic" }
- **GET /api/items:** Retrieve all items in the grocery list.
 - Optional query parameters: category, purchased
- **GET /api/items/{id}:** Retrieve a specific item by its ID.
- **PUT /api/items/{id}:** Update a specific item by its ID.
 - Request body: { "itemName": "Almond Milk", "quantity": 1, "unit": "liter", "category": "Dairy", "notes": "Unsweetened" }
- **DELETE /api/items/{id}:** Delete a specific item by its ID.
- **PATCH /api/items/{id}/purchase:** Mark an item as purchased.

Postman Demo



Tasks

- Create your Github repository and send it to karan.kwatra@openavenuesfoundation.org
- Install Postman: <https://www.postman.com/>
- Migrate your database schema (Appendix 1)
- Set up API server for next week (Appendix 2)

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Appendix 1 – Database Changes

- Update the `schema.prisma` file
- Run `npx prisma migrate dev --name <name_of_migration>`
- Update queries.ts file to reflect the new schema. Run `npm run queries`
- Go to the prisma console to ensure your queries ran successfully

Appendix 2 – Backend Setup

- <https://nextjs.org/docs/app/getting-started/installation>
- Karan to do